

Abstracts

Integrated Planar NRD Oscillator Suitable for Low-Cost Millimeter-Wave Applications

K. Wu and L. Han. "Integrated Planar NRD Oscillator Suitable for Low-Cost Millimeter-Wave Applications." 1996 Microwave and Guided Wave Letters 6.9 (Sep. 1996 [MGWL]): 329-331.

A class of oscillators are proposed on the basis of a hybrid integration of planar circuits and nonradiative dielectric (NRD) guide. Compared to the existing design procedure and the conventional geometry, the novel oscillator uses an NRD resonator made of low-loss and low-permittivity material coupled to planar oscillator through an aperture. This three-dimensional circuit design allows to have a complete symmetry of circuit and a build-in feedback loop. An HEMT-based experimental prototype shows that the novel scheme of oscillator design is attractive for use in the future low-cost millimeter-wave circuits and systems.

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